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# DOING BUSINESS IN CANADA

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## CONSTRUCTION AND EQUIPMENT STANDARDS





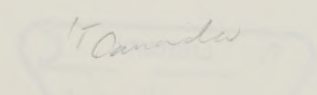
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DOING BUSINESS IN CANADA

# Construction and Equipment Standards



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Dept. of



Government  
of Canada

Industry, Trade  
and Commerce

Gouvernement  
du Canada

Industrie  
et Commerce

## FOREWORD

Every effort has been made to reflect accurately the legislation in force at the time of preparing the material in this text. It should be appreciated, however, that this booklet covers only basic principles. Relevant authorities or solicitors should be consulted for precise and detailed advice.

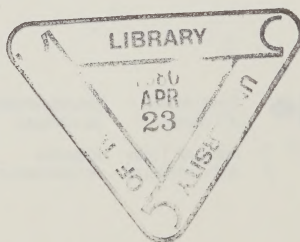
Titles of publications available from the Department of Industry, Trade and Commerce in the series "Doing Business in Canada" are:

- No. 1 — The Business Environment
- No. 2 — Forms of Business Organization in Canada
- No. 3 — Canadian Customs Duties
- No. 4 — Taxation — Income, Business, Property
- No. 5 — Taxation — Sales, Excise, Commodity
- No. 6 — Labour Legislation
- No. 7 — Construction and Equipment Standards
- No. 8 — Federal Incentives to Industry
- No. 9 — Patents, Trade Marks, Industrial Designs and Copyrights
- No. 10 — Financing Canadian Industries.

Further information is available from:

The Business Centre (34/2)  
Department of Industry, Trade and Commerce  
235 Queen Street  
Ottawa, Ontario K1A 0H5  
Tel: Call collect (613) 995-5771  
Telex: 053-4123

Revised 1979





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## INTRODUCTION

Standards in Canada are not set or regulated by any single agency. Federal, provincial and municipal governments are involved, as well as private agencies. Some of the major private agencies are part of National Standards System of Canada (NSS), an entity organized and co-ordinated by the Standards Council of Canada (SCC).

The National Standards System is made up of private and public organizations concerned with voluntary standardization in Canada, including such activities as standards-writing, certification, testing and the operation of quality assessment schemes. The standards-writing organizations accredited to the National Standards System, at time of publication, are the Canadian Gas Association (CGA), the Canadian Government Specifications Board (CGSB), the Underwriters' Labora-

tories of Canada (ULC), the Canadian Standards Association (CSA), and the Bureau de Normalisation du Québec (BNQ).

The Standards Council of Canada operates a Standards Information Service (SIS) to assist users of standards in identifying and verifying the existence of standards documents; it also identifies the organization responsible for publishing them and advises where and how standards documents may be purchased or procured. The SIS publishes a Directory and Index of Canadian voluntary standards published by the five standards-writing organizations in the NSS. This publication is available at the SIS. The SIS can be reached by mail at: Standards Council of Canada, 350 Sparks Street, Ottawa Canada K1R 7S8.

## METRIC CONVERSION

Conversion to the metric (SI) system in Canada is being implemented on a voluntary basis. Each sector of the economy carries out its own conversion program in conjunction with its suppliers and customers. The entire program is guided and co-ordinated by the Metric Commission Canada.

The commission provides a wide range of publications on metric conversion to trade associations and manufacturing resource and service industries. It also provides audio-visual aids, symposia, and technical information.

The commission also contributes to the costs of replacement or conversion of eligible workers' tools and can provide information on special tax measures that apply to costs of conversion of tools,

machines and measuring instruments.

Metric Conversion Information Centres are located in the capital cities of the Provinces of British Columbia, Alberta, Saskatchewan, Quebec, New Brunswick, Prince Edward Island, Newfoundland and the Northwest Territories and Yukon Territory. These centres channel information about metric conversion to enterprises, businesses, trade associations, Chambers of Commerce and consumer associations. New centres are to be added.

Further information concerning metric conversion may be obtained by writing to the Metric Commission Canada, 235 Queen Street, Ottawa, Ontario K1A 0H5.

## FACTORIES AND COMMERCIAL BUILDINGS

The erection or alteration of a building for use as a factory is normally subject to provincial government control. Drawings and specifications must be submitted to the provincial Department of Labour or equivalent for approval (see Appendix A). Similar requirements may apply to the erection or alteration of a building to be used as a retail outlet, restaurant, office, etc.

The next step is to secure a municipal building permit. Such permits are usually issued only when provincial approval has been obtained. Construction must be carried out in accordance with local building by-laws.

Boilers and pressure vessels must be approved before being installed. Designs must be submitted to the provincial Department of Labour for approval and registration before construction can begin. Inspections are made during construction, installation and initial operations, and annually thereafter. Provincial authorities will usually accept the initial inspection by their counterparts in the area in which the boilers or pressure vessels were constructed.

Many provincial authorities have adopted Code B51, "Code for the Construction and Inspection of Boilers and Pressure Vessels", issued by the Canadian Standards Association. The CSA B51 Code is

intended to provide for the safe design, construction, installation, operation and repair of boilers, pressure vessels, and related equipment, as well as to promote uniform requirements among the provinces. It is suggested that the provincial authorities, even though having adopted the B51 Code, should be consulted as to the intent of such adoption, as the Code may have been adopted with exemptions or with additional requirements.

Regulations are also in force in most provinces with regard to elevators and hoists. Equipment is subject to inspection by provincial labour officials.

The Canadian Standards Association has issued CSA Standard B44-75 "Safety Code for Elevators, Dumbwaiters, Escalators and Moving Walks" to meet a desire for uniform legislation throughout the various provinces. The purposes of CSA Standard B44-75 are to provide reasonable safety for persons using elevators, dumbwaiters, escalators and moving walks by establishing minimum standards for design, installation and maintenance, and to provide a uniform standard for adoption by provincial authorities throughout Canada. It is also intended as a standard reference for the use of architects, consulting engineers, and elevator manufacturers and owners.

The Canadian Standards Association has issued other codes relating to the construction and main-

tenance of high buildings:

Z185 — 1975, Safety Code for Personnel Hoists.

Z256 — 1972, Safety Code for Material Hoists.

Z271 — 1974, Safety Code for Powered Platforms.

Z248 — 1975 Safety Code for Tower Cranes.

Z150 — 1974 Safety Code for Mobile Cranes.

B311 — 1979 Safety Code for Manlifts.

An employer should forward notice to his provincial Department of Labour when undertaking to occupy a factory. The notice must contain information as to the name of the firm, the location of the plant, the nature of the work, and the amount of motive power to be used.

Premises must be maintained so that they are structurally sound and in a safe condition. Where provincial authorities consider that machinery, construction, etc., is or could be a source of danger to health or safety of an employee or of persons having access to a factory, they can so notify the employer or owner and direct him to take measures to counteract or eliminate the danger.

## BUILDING CODES

Building codes are intended primarily to ensure the structural adequacy and fire safety of buildings and to prevent the development of health hazards.

In the past, Canada's municipalities have been granted authority under appropriate provincial statutes to prepare or adopt building regulations as their local building by-laws. Recently, however, a number of provinces have been developing uniform building standards for application within their respective jurisdictions based on the National Building Code of Canada.

The National Building Code is produced under the auspices of the Associate Committee on the National Building Code of the National Research Council of Canada and is issued in legal form to encourage adoption by jurisdictional authorities. It is an advisory document only, having no legal status unless adopted by a governing authority. The Associate Committee provides this service in the interest of establishing uniform building regulations across Canada.

The National Building Code has received wide acceptance through adoption initially by local

governments and more recently by provincial governments as they introduce provincial codes based on the national code.

The National Building Code is under regular revision by committees knowledgeable in all phases of the building industry. The code is currently published at three-year intervals with editions in 1977 and 1980.

New construction must comply with provincial and municipal regulations, and perhaps with other standards. For example, Canada Mortgage and Housing Corporation has prescribed the Residential Standards (Canada) as the standard for all buildings financed under the National Housing Act. This document contains the housing requirements from Part 9 of the National Building Code. It also contains requirements, going beyond the scope of the National Building Code, which are considered necessary to regulate residential construction under the National Housing Act.

Another standard of interest to manufacturers of factory built houses is Canadian Standards Association Standard A277-1972, "Procedure for Certifi-



cation of Factory Built Houses". This describes procedures for certifying factory built housing to the requirements of the National Building Code of Canada. The CSA also publishes standards for mobile homes and recreational vehicles.

A more recent addition to the National Building Code series is "Building Standards for the Handicapped". This is intended to permit the design of any building for use by the physically handicapped person with emphasis on the wheelchair patient. Designers and building officials of all levels of government are encouraged to consider this document in the design of buildings used by the public such as libraries, assembly halls and theatres.

Another document of interest is "Measures for Energy Conservation in New Buildings", which provides guidance on the design and construction of new buildings to conserve energy. It is prepared in a form suitable for adoption by a governing authority, and is currently under review by various provincial agencies with respect to its possible application within their respective jurisdictions.

Most municipalities have zoning by-laws which are intended to protect established areas from unwanted changes in land use and to guide or control the development of new areas. Where such regulations are in existence, building locations must be discussed with municipal officials before a building permit can be obtained. These permits serve a dual purpose. As well as regulating the siting of various

buildings, they provide a means of bringing new construction to the attention of the local building inspector responsible for enforcing the municipal by-laws.

Although the National Building Code and the Residential Standards (Canada) are based on well established traditional construction techniques and materials, provision is made for acceptance of new techniques, materials and building equipment providing they meet the intent of the Code. The building official responsible for administration of local building regulations has to be satisfied that any new system or material will provide the same basic level of safety as those specified in the Code.

For work financed under the National Housing Act, Canada Mortgage and Housing Corporation reviews and may accept proposals incorporating new techniques or materials and publishes a list of acceptances under the title "Acceptable Building Materials, Systems and Equipment". Enquiries about the acceptance procedure should be directed to:

Director, Standards Division  
Professional Standards and  
Technology Directorate  
Canada Mortgage and Housing  
Corporation  
Ottawa, Ontario  
K1A 0P7

## BUILDING STANDARDS INDEX

This is a joint publication of the Department of Industry, Trade and Commerce and the Canadian Government Specifications Board. It lists all codes, standards, and specifications published by recognized organizations and/or permitted in the Cana-

dian construction industry. For further information write to the Construction and Consulting Services Branch, Department of Industry, Trade and Commerce, Ottawa K1A 0H5.

## PLUMBING CODES

Provincial plumbing codes and the plumbing codes of major cities are usually based on the Canadian Plumbing Code, which is part of the National Building Code. In most cases they are mandatory, having been adopted by municipalities as by-laws.

Where plumbing by-laws have been enacted, fees are charged for each inspection, and approval of the installation must be obtained before the system can be used.

## ELECTRICAL INSTALLATIONS

Electrical installations must conform to the provisions of Canadian Standards Association Standard C22.1, Canadian Electrical Code, Part 1. This

standard with minor modifications has been adopted by all provincial governments and has the force of law.



## ELECTRICAL APPARATUS AND EQUIPMENT

Electrical apparatus and equipment must be "approved" by the province in which it is offered for sale. CSA certified apparatus and equipment is accepted as "approved" by the provincial governments.

In Ontario, for example, anyone selling unapproved electrical equipment is liable to a fine "of not less than \$25.00 and not more than \$500.00 for each offence" on a summary conviction. The Power Corporation Act of Ontario requires that electrical goods be properly listed with CSA, meet CSA standards and bear the CSA monogram. Regulations also prohibit advertising, selling, renting, or transferring ownership or possession where electrical equipment has not been certified by CSA. Other provinces have similar regulations. Usually a dealer buying electrical merchandise will insist that the terms of sale include a warranty that the equipment meets the CSA standard.

Applications for CSA certification of electrical equipment may be made in person or by writing to the Certification Division, Canadian Standards Association, 178 Rexdale Boulevard, Rexdale, Ontario, M9W 1R3, or to a CSA Regional Office (Montreal, Winnipeg, Edmonton and Vancouver).

United Kingdom manufacturers should address

their communications to BSI/CSA Agency, British Standards Institution, Maylands Avenue, Hemel Hempstead, Herts, England; European manufacturers — N.V. KEMA, Utrechtsweg 310, Arnhem, The Netherlands; Japanese manufacturers — Japan Machinery and Metals Inspection Institute, 1-21-25 Kinuta, Setagaya-ku, Tokyo, Japan.

An application form will be furnished, and when completed and returned, together with a specified initial deposit (to be applied against the costs of a laboratory investigation, report, certification, etc.), work will be initiated according to the schedule of jobs on hand.

Samples must be delivered as directed, to the specified testing laboratory with all carriage, customs, brokerage and other charges prepaid. The samples will be inspected or tested to determine whether they conform to CSA requirements. Should the final decision be favourable, the applicant will be asked to accept the CSA follow-up Inspection Service.

This follow-up Inspection Service, involving an annual fee, is carried out by means of periodic tests or inspection at the factory, by observation of the certified equipment in service, or by tests on samples submitted or purchased in the open market.

## WEIGHING AND MEASURING DEVICES, ELECTRICITY AND GAS METERS

The importation, manufacture, sale, and use in trade of weighing and measuring devices for trade use are controlled in Canada under legislation administered by the Legal Metrology Branch of the Department of Consumer and Corporate Affairs, Ottawa, K1A 0C9. This legislation covers all types of weighing and measuring devices including scales, linear and capacity measures and machines, volumetric meters and electricity and gas meters. Included is ancillary equipment incorporated in devices or in installations such as digital integrators, volume correcting instruments and remote readouts, printers and cash registers, transformers, ther-

mometers, and pressure gauges.

Before import, sales and use for trade, the meters and devices must be approved by the branch. Approval involves examination of manufacturer's product specifications and evaluation of performance of production samples by the branch. The equipment is either approved and listed, or rejected, as the circumstances warrant. Most devices of an approved type are subject to inspection before being first used in trade, and then to periodic inspection during their subsequent use in trade.

## APPENDIX A

PROVINCIAL DEPARTMENTS OF LABOUR  
OR EQUIVALENT

## BRITISH COLUMBIA

Ministry of Labour  
Parliament Buildings  
Victoria, British Columbia  
V8V 1X4

## ALBERTA

Department of Labour  
10808 - 99th Avenue  
Edmonton, Alberta  
T5K 0G1

## SASKATCHEWAN

Department of Labour  
1914 Hamilton Street  
Regina, Saskatchewan  
S4P 4V4

## MANITOBA

Department of Labour and Manpower  
Legislative Building  
Winnipeg, Manitoba  
R3C 0V8

## ONTARIO

Ministry of Labour  
400 University Avenue  
Toronto, Ontario  
M7A 1T7

## QUEBEC

Ministère du Travail et de la Main-d'oeuvre  
425, St-Amable  
Québec (Québec)  
G1R 4Z1

## NEW BRUNSWICK

Department of Labour and Manpower  
P.O. Box 6000  
Fredericton, New Brunswick  
E3B 5H1

## NOVA SCOTIA

Department of Labour and Public Works  
P.O. Box 697, 5151 Terminal Road  
Halifax, Nova Scotia  
B3J 2T8

## PRINCE EDWARD ISLAND

Department of Labour  
P.O. Box 2000  
Charlottetown, Prince Edward Island  
C1A 7N8

## NEWFOUNDLAND

Department of Labour and Manpower  
Gorman Butler Building  
Pippy Place  
St. John's, Newfoundland  
A1C 5T7





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